

Year 9/10 Code and Create

Semester 2 2021 Course Outline

Students will explore the fundamentals of Computer Science with visual and text based coding languages. They will create projects, programs and games in a number of coding languages including, html, CSS, Python and JavaScript. Students will apply these new skills to solve different problems and debug programs. Students may also investigate electronics and robotics, using programming to bring constructions to life. Later projects allow students to explore other coding languages, research where they are currently being used and to select one to work with.

Learning Outcomes

Students will be assessed on the following Learning Outcomes:

- 9/10.987 Identifies the changes necessary to designed solutions to realise the preferred futures described
- 9/10.988 Evaluates the features of technologies and their appropriateness for purpose for one or more of the technologies contexts, when producing designed solutions for identified needs or opportunities
- 9/10.989 Creates designed solutions for one or more of the technologies contexts based on a critical evaluation of needs or opportunities
- 9/10.990 Establishes detailed criteria for success, including sustainability considerations, and uses these to evaluate ideas and designed solutions and processes
- 9/10.991 Creates and connects design ideas and processes of increasing complexity and justifies decisions
- 9/10.1022 Plans and manages digital projects using an iterative approach
- 9/10.1023 Defines and decomposes complex problems in terms of functional and non-functional requirements
- 9/10.1024 Designs and evaluates user experiences and algorithms
- 9/10.1025 Designs and implements modular programs, including an object-oriented program, using algorithms and data structures involving modular functions that reflect the relationships of real-world data and data entities
- 9/10.1027 Tests and predicts results and implements digital solutions

Assessment Tasks

Students will be assessed on their participation and completion of classwork and assessment tasks.

Task	Week Due*
Reference Booklet inspections	Ongoing
Website Design Portfolio	Term 3, Week 7
Python Design Project	Term 4, Week 2
Self-Directed Project (language of choice, can involve physical components)	Term 4, Week 8